NAMAN YESHWANTH KUMAR

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EDUCATION

Master of Science **Expected: May 2026**
Arizona State University - Computer Eng (GPA 3.8/4.0) **Tempe, AZ**

- Relevant coursework: **Perception in Robotics**, **Artificial Intelligence**, **Reinforcement Learning in Robotics**, **Computer Vision**, Advanced Computer Architecture, Hardware Co-design, Foundations of Algorithms, SoC Design

Nanodegree - Self-Driving Car Engineer **February 2023**
Udacity

- Key Areas: Machine Learning, Sensor Fusion, Computer Vision, Path Planning, and Control, with hands-on projects in object detection, trajectory tracking, and autonomous vehicle motion

Bachelor of Engineering **June 2022**
BMS College of Engineering - Electrical and Electronics Eng **Bengaluru, India**

TECHNICAL SKILLS

Deep Learning & Foundation Models: PyTorch | TensorFlow | Neural Networks | Computer Vision | Multimodal AI | Model Optimization
Programming: Python | C++ | MATLAB | SQL | Shell Script | JavaScript
Vision & Perception: 3D Geometry | Multiview Geometry | Object Detection | Semantic Segmentation | Sensor Fusion | LiDAR | Path Planning
Edge Optimization: Quantization | Pruning | Distillation | ARM | Embedded Systems | Real-time Inference | TensorFlow Lite
Robotics & Tools: ROS 2 | Reinforcement Learning | Simulink | CoppeliaSim | Docker | Git | AWS | CI/CD Pipelines

WORK EXPERIENCE

Software Developer **October 2022 - April 2024**
NCR GOLD **Bengaluru, India**

- Designed and deployed a custom ordering platform (Django) to streamline inventory and billing for a wholesale jewelry business; processed 10,000+ orders to improve efficiency.
- Containerized applications using Docker and integrated AWS cloud deployment, providing scalable performance and seamless updates.

Research Intern **October 2021 - August 2022**
Indian Institute of Science **Bengaluru, India**

- Led the Propulsion Circuit Team, optimizing a 1.5kW axial flux BLDC motor with Ansys Maxwell; boosted efficiency and responsiveness by upgrading material and coil designs and implementing a new FOC system.
- Conducted advanced research on speed control algorithms and battery management systems for eVTOL aircraft leveraging Simulink, contributing to notable improvements in efficiency and reliability of aircraft propulsion systems.

PROJECT EXPERIENCE

Trezzit - Full Stack Bill Splitting Application **February 2025 - Present**

- Architected multimodal AI platform using Python (Django) and React, implementing Google Gemini foundation model for intelligent expense categorization; deployed production system serving 120+ active users with real-time inference.
- Designed and implemented neural network integration pipeline with automated data labeling and model training workflows; optimized model performance achieving 75% reduction in manual processing time through deep learning automation.
- Engineered scalable backend architecture with database optimization and comprehensive testing infrastructure; demonstrated expertise in full model lifecycle from data collection to production deployment.

Intel Automated Self-Checkout (Open Source Contributor) **January 2025 - February 2025**

- Developed a framework in Python to publish and analyze LiDAR sensor data for autonomous checkout systems; successfully merged contributions to the main branch after comprehensive code review.
- Leveraged Docker and CI/CD pipelines, collaborating with a distributed team to enhance sensor fusion accuracy.

Raspberry Pi Self-Driving Car **February 2022 - July 2022**

- Designed autonomous vehicle system integrating computer vision models (lane detection, traffic sign recognition) with hardware control on ARM-based Raspberry Pi; optimized neural networks for real-time edge inference achieving 30 FPS on resource-constrained platform.
- Trained custom TensorFlow models for object detection and classification; implemented model quantization and optimization techniques for embedded deployment, demonstrating deep understanding of loss functions, optimization, and edge compute constraints; awarded Best Project among 40 submissions.

AWARDS & HONORS

- Won the 'Best Use of AI' award at Strategy X DevHacks'25 at ASU for developing AdaptED AI, a platform leveraging Google's Gemini AI to generate personalized learning paths and resources for students.
- Secured second place in the Hack SoDA 2024 at ASU with a team of four, developing PassGen, a secure and offline Chrome Extension for generating unique passwords, during a 24-hour hackathon sponsored by Amazon.
- Ranked among the Top Ten teams in the e-Yantra national-level robotics competition organized by IIT Bombay, for designing and developing a self-balancing dairy bike on CoppeliaSim, February 2022.